

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Specification.

While high density plasma deposited insulating films may benefit from the present invention, as also noted in *Yu*, high density plasma deposited phosphosilicate glass (HDP PSG) may have particularly advantageous properties in the fabrication of semiconductor devices. In particular, a layer of HDP PSG having a high concentration of phosphorous, relative to other conventional approaches, may provide numerous advantages. Accordingly, in one very particular embodiment, a phosphorous dopant source supply rate may be varied to compensate for temperature variations in the formation a HDP PSG having a relatively high concentration of phosphorous. A relatively high concentration of phosphorous may include greater than about 7% by weight, more particularly about 8-10%.